

## IN THE CLAIMS

Please amend the claims as follows:

### Listing of Claims

Claims 1-22 (Cancelled).

23. (Currently Amended) A transmission method comprising:

~~a data sequence generation step of~~ outputting, from a transmission apparatus with a plurality of antennas, one of a first data sequence comprising a first plurality of signals representing ~~a the~~ same data and a second data sequence comprising a second plurality of signals representing varying data, the one of the first data sequence and the second data sequence being output according to a frame generation instruction signal including a symbol reporting a ~~transmission method of~~ transmitting transmission signals; ~~and~~

selecting, from a plurality of modulation schemes, a modulation scheme for modulating the first data sequence or the second data sequence, and modulating one of the first data sequence and the second data sequence using the selected modulation scheme; and

~~a transmission processing step of~~ transmitting the modulated first data sequence or the modulated second data sequence from the plurality of antennas, wherein

the one of the first data sequence and the second data sequence that is output is selected using a first time interval that is longer than a second time interval that is used to select the modulation scheme.

24. (Currently Amended) The transmission method according to claim 23, further comprising wherein:

transmitting the signals ~~transmitted~~ from the plurality of antennas ~~are transmitted~~ as an orthogonal frequency division multiplexing (OFDM) signal; and

mapping the first data sequence or the second data sequence ~~is mapped~~ to at least two of a plurality of subcarriers forming the OFDM signal.

25. (Currently Amended) The transmission method according to claim 23, ~~further comprising:~~

~~a modulation step of selecting a modulation scheme for modulating the transmission data of the first or second data sequence from a plurality of modulation schemes, and modulating the transmission data using the modulation scheme selected, wherein a first modulation scheme to apply to the first data sequence and a second modulation scheme to apply to the second data sequence have a the same maximum M-ary modulation index value.~~

26. (Currently Amended) The transmission method according to claim 23, wherein the symbol reporting the ~~transmission~~ method of transmitting the transmission signals is determined based on a channel.

27. (Currently Amended) The transmission method according to claim 23, ~~further comprising:~~

~~a modulation step of selecting a modulation scheme for modulating the transmission data~~

~~of the first or second data sequence from a plurality of modulation schemes, and modulating the transmission data using the modulation scheme selected, wherein for the modulation scheme is selected from[[,]] at least one of the plurality of modulation schemes is selected while transmitting the modulated first data sequence or the modulated second data sequence is transmitted.~~

28. (Currently Amended) The transmission method according to claim 23, wherein outputting the one of the first data sequence and the second data sequence comprises cyclically shifting by a predetermined period of time,~~in the data sequence generation step,~~ data represented by at least one of the first and second plurality of signals included in the first data sequence or the second data sequence ~~is cyclically shifted by a predetermined period of time.~~

29. (Currently Amended) The transmission method according to claim 23, wherein the modulated second data sequence is transmitted using,~~wherein, in the transmission processing step,~~ an eigenmode having,~~in which~~ one of a singular vector and an eigen vector of a channel matrix is used as a channel signature vector,~~is used as a method for transmitting the second data sequence.~~

30. (Currently Amended) The transmission method according to claim 25, wherein the modulated second data sequence is transmitted using,~~in the transmission processing step,~~ an eigenmode having,~~in which~~ one of a singular vector and an eigen vector of a channel matrix is ~~used as a channel signature vector, is used as a method for transmitting the second data sequence.~~

31. (Currently Amended) The transmission method according to claim 27, wherein the modulated second data sequence is transmitted using, ~~in the transmission processing step,~~ an eigenmode having, ~~in which~~ one of a singular vector and an eigen vector of a channel matrix is used as a channel signature vector, ~~is used as a method for transmitting the second data sequence.~~

32. (Currently Amended) The transmission method according to claim 23, wherein outputting the one of the first data sequence and the second data sequence comprises switching, ~~in the data sequence generation step,~~ the first data sequence and the second data sequence are ~~switched~~ according to a ~~the~~ number of communicating parties.

33. (Currently Amended) A radio communication system comprising:  
a transmission apparatus with a plurality of antennas; and  
a reception apparatus that receives first signals transmitted from the plurality of antennas of the transmission apparatus,

the reception apparatus comprising:

a channel fluctuation estimation section that estimates a channel fluctuation for ~~about~~ the first signals transmitted from the plurality of antennas of the transmission apparatus;

a transmission method requesting section that selects one of a first transmission method of transmitting a first plurality of signals representing a ~~the~~ same data from the plurality of antennas and a second transmission method of transmitting a second plurality

of signals representing varying data from the plurality of antennas, the first and second plurality of signals being transmitted based on the estimated channel fluctuation, and the transmission method requesting section sending a first sends a request for the selected transmission method to the transmission apparatus;

a modulation scheme requesting section that selects one of a plurality of modulation schemes based on the estimated channel fluctuation and sends a second request for the selected modulation scheme to the transmission apparatus; and

a control section that controls whether or not to send the first and second requests from the transmission method requesting section and the modulation scheme requesting section, according to ~~procedures of communication~~ procedures with the transmission apparatus, wherein: and

the transmission method requesting section selects one of the first transmission method and the second transmission method using a first time interval that is longer than a second time interval that is used to select the modulation scheme in the modulation scheme requesting section, and

the transmission apparatus comprising:

a generation section that generates second signals corresponding to the transmission method requested from the reception apparatus; and

a transmission processing section that modulates the second signals generated in the generation section according to the modulation scheme requested from the reception apparatus, and transmits the modulated second signals from the antennas.

34. (Currently Amended) A transmission apparatus comprising:

- a plurality of transmission antennas;
- a frame generation instruction section that outputs a frame generation instruction signal including a symbol reporting a transmission method of transmitting transmission signals;
- a data sequence generation section that outputs one of a first data sequence comprising a first plurality of signals representing a the same data and a second data sequence comprising a second plurality of signals representing varying data, the one of the first data sequence and the second data sequence being output according to the frame generation instruction signal; ~~and~~
  - a modulation scheme section that selects a modulation scheme for modulating the first data sequence and the second data sequence from a plurality of modulation schemes and modulates the first data sequence and the second data sequence using the selected modulation scheme; and
- a transmission processing section that transmits the modulated first data sequence or the modulated second data sequence from the plurality of antennas, wherein
  - the one of the first data sequence and the second data sequence to be output is selected
  - using a first time interval that is longer than a second time interval that is used to select the modulation scheme.

35. (Currently Amended) The transmission apparatus according to claim 34, wherein:

- the signals transmitted from the plurality of antennas are transmitted as an orthogonal frequency division multiplexing (OFDM) signal; and
- the first data sequence or the second data sequence is mapped to at least two of a plurality

of subcarriers forming the OFDM signal.

36. (Currently Amended) The transmission apparatus according to claim 34, further comprising:

~~a modulation section that selects a modulation scheme for modulating the transmission data of the first or second data sequence from a plurality of modulation schemes, and modulates the transmission data using the modulation scheme selected,~~ wherein a first modulation scheme to apply to the first data sequence and a second modulation scheme to apply to the second data sequence have the same maximum M-ary modulation index value.

37. (Currently Amended) The transmission apparatus according to claim 34, further comprising:

~~a modulation section that selects a modulation scheme for modulating the transmission data of the first or second data sequence from a plurality of modulation schemes, and modulates the transmission data using the modulation scheme selected,~~ wherein for the modulation scheme, at least one of the plurality of modulation schemes is selected for the modulation scheme while the first data sequence or the second data sequence is transmitted.

38. (Currently Amended) The transmission apparatus according to claim 34, wherein the data sequence generation section cyclically shifts by a predetermined period of time, data represented by at least one of the first and second plurality of signals included in the first data sequence or the second data sequence ~~by a predetermined period of time~~.

39. (Previously Presented) The transmission apparatus according to claim 34, wherein the transmission processing section uses an eigenmode, in which one of a singular vector and an eigen vector of a channel matrix is used as a channel signature vector, as a method for transmitting the second data sequence.

40. (Previously Presented) The transmission apparatus according to claim 36, wherein the transmission processing section uses an eigenmode, in which one of a singular vector and an eigen vector of a channel matrix is used as a channel signature vector, as a method for transmitting the second data sequence.

41. (Previously Presented) The transmission apparatus according to claim 37, wherein the transmission processing section uses an eigenmode, in which one of a singular vector and an eigen vector of a channel matrix is used as a channel signature vector, as a method for transmitting the second data sequence.

42. (Currently Amended) The transmission apparatus according to claim 34, wherein the data sequence generation section switches the first data sequence and the second data sequence according to a the number of communicating parties.

43. (Currently Amended) A reception apparatus comprising:  
a transmission method determining section that selects one of a first transmission method



of transmitting a first plurality of signals representing a the same data from a plurality of antennas and a second transmission method of transmitting a second plurality of signals representing varying data from the plurality of antennas;

a modulation scheme determining section that selects one of a plurality of modulation schemes;

a control section that controls whether not to select the one of the first and second transmission methods ~~method~~ and the modulation scheme in the transmission method determining section and the modulation scheme determining section according to ~~procedures of~~ communication procedures with a communicating party; and

a requesting section that conveys a request for the selected one of the first and second transmission methods ~~method~~ and modulation scheme to the communicating party, wherein

the control section selects the one of the first and second transmission methods in the transmission method determining section using a first time interval that is longer than a second time interval that is used to select the modulation scheme in the modulation scheme determining section.

44. (Currently Amended) The reception apparatus according to claim 43, wherein the control section performs control such that, while data is received, the transmission method determining section does not select the one of the first and second transmission methods ~~method~~ and only the modulation scheme determining section ~~alone~~ selects the modulation scheme.

45. (Currently Amended) The reception apparatus according to claim 43, further

comprising:

a channel estimation section that estimates at least one of a channel of received signals and a reception field intensity of the received signals, wherein

the transmission method determining section selects the one of the first and second transmission methods ~~method~~ based on the estimation result in the channel estimation section.

46. (Currently Amended) The reception apparatus according to claim 43, wherein a first modulation scheme to apply to the first data sequence and a second modulation scheme to apply to the second data sequence have the same maximum M-ary modulation index value.